DOCUMENT RESUME

ED 360 919 HE 026 657

AUTHOR Matross, Ronald P.
TITLE The Virtual Office: An Organizational Paradigm for Institutional Research in the 90's. AIR 1993 Annual Forum Paper.
PUB DATE May 93
NOTE 18p.; Paper presented at the Annual Forum of the Association for Institutional Research (33rd, Chicago, IL, May 16-19, 1993).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Centralization; College Outcomes Assessment; *Computer Uses in Education; *Cooperation; Databases; *Decentralization; Higher Education; *Institutional Research; Marketing; Planning; State Universities; Student Characteristics; Student Personnel Services; Work Environment
IDENTIFIERS *AIR Forum; *University of Minnesota

ABSTRACT

In response to conflicting centralization and decentralization pressures, the University of Minnesota institutional research office responded with a "virtual enterprising"--a group of organizationally distinct units acting as if they were a single unit. The four elements in this organizational approach were: (1) "soft control" through data base design; (2) a "favor bank"--a step toward functional project teams; (3) a common publication outlet with peer review; and (4) a shared master plan. Soft control helped separated analysts to do consistent work with less effort and to use consistent official data and definitions more easily through modifications in the data base. The favor bank offered a modest chance for some ties across division and department lines in a setting where team projects are a rarity. A jointly published series of brief reports, "Research on University of Minnesota Students," allowed researchers to package analyses and data in a format useful to busy administrators. The shared master plan put individual studies in a master plan of core studies to fill in gaps, cover key issues, and put them all on a schedule. The plan begins with a template of four study categories: student outcomes; marketing studies; evaluation of student services and programs; and student characteristics. An example of the common publication and part of the master plan are appended. (Contains six references.) (JB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 360 919

The Virtual Office: An Organizational Paradigm for Institutional Research in the 90's

Presented at the 33d annual forum of the
Association for Institutional Research
Chicago, May 1993

Ronald P. Matross

Data and Reporting Services
Office of Student Affairs
University of Minnesota
231 Pillsbury Drive S.E.
Minneapolis, MN 55455
(612) 625-1027

HE026 657

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

AIR

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

for Management Research, Policy Analysis, and Planning

This paper was presented at the Thirty-Third Annual Forum of the Association for Institutional Research held at the Chicago Marriott Downtown, Chicago, Illinois, May 16-19, 1993. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Chair and Editor
Forum Publications
Editorial Advisory Committee

The virtual office:
An organizational paradigm for institutional research in the 90's

Abstract

Institutional research in the 1990's must cope with a conflict between forces for centralization from new accountability demands and forces for decentralization brought on by microcomputers and budget constraints. New organizational paradigms are needed to resolve the conflict. One approach is the "virtual enterprise," a group of organizationally distinct units acting as if they were a single unit. This paper describes an attempt to create a "virtual IR office" among separate institutional research units on a large campus. The four elements in this organizational approach are: (1) "Soft control" through data base design. (2) A "favor bank" as a step toward functional project teams. (3) A common publication outlet with peer review. (4) A shared master plan of ongoing projects. Progress and problems are discussed, along with the applicability of the approach to other institutions.

Introduction

In a 1990 AIR Forum address on the future of institutional research, George Keller referred to the "twin pulls: centralization and decentralization." (Keller, 1990). On the one hand, institutional research is being pulled toward more centralization in order to meet growing demands for internal and external accountability, quality control, and accurate comparisons.

On the other hand, shrinking budgets, and most especially, the development of decentralized computing technology have been equally powerful forces for decentralization. Open-access client/server computing systems being developed on many campuses may lead to what Keller termed an "information feudalism of semi-independent computer domains all over the campus."

Keller went on to warn that the twin pulls will "tear institutional research in half," forcing an institutional researcher to choose between serving as a central information officer who sets standards and subdues the individual information fiefdoms or serving as a leader or staff for one of the fiefdoms. He challenged the field of institutional research to develop new options for dealing with the conflicting demands faced by the profession.

The purpose of this paper is to present one such option, an adaptation of the concept of "virtual enterprise" put forward by Savage, 1990 and more recently elaborated as the "virtual corporation" by Davidow and Malone, 1992. Savage applied the computer science idea of virtual reality to organizational development theory. Virtual realities are computer simulations detailed enough to act as if they are real (flight simulators, for example). By analogy, a virtual enterprise is a set of disparate units and individuals working together in an area as if they were part of the same centralized organization. The creation of a virtual enterprise requires new forms of management and the technology to support them.

Virtual enterprises organize their work by project rather than function, and rely on cross-functional teams of peers to do much of their work. Teams are formed as needed for particular projects, drawn together when someone sees a particular business need and persuades others in different parts of the organization to use their talents on a project to meet the need. Team

members are often physically separated, sharing their work electronically. Organizations which have successfully implemented the approach have dramatically improved their response to fast-changing market conditions.

This paper describes an effort to create a "virtual IR office" among disparate units dealing with student data at the University of Minnesota. The goal of the effort is to get different organizations to work together to provide consistent answers to important policy questions concerning the University's student body.

The key elements in this attempt to create a virtual IR office are:

1. Soft control through data base design
2. The favor bank: a step toward functional project teams
3. A common publication outlet with peer review
4. A shared master plan of ongoing projects

The remainder of this paper discusses the progress and problems we have encountered in developing each of these elements and the effort as a whole. The paper ends with suggestions for implementing the virtual office approach at different types of institutions.

1. Soft control through data base design

The *sine qua non* of a virtual enterprise is a computing network permitting electronic communication and common access to organizational data. The University of Minnesota made programming access to individual student data available in 1985. Since that time, institutional research on our campus has indeed been "pulled in half," as Keller had predicted. While central IR offices have remained busy, colleges and departments have developed a new class of positions, combining institutional research and data base administration. The staff in these positions work in the service of their units by analyzing data and developing unit-specific data bases. Units' need to use data to defend against budget cuts has given added impetus to the creation of decentralized analyst positions.

There have been both advantages and disadvantages to open data access. The primary advantage is that the rapidly expanding data needs of colleges and departments are being met much better than when data access was restricted only to central office. Secondarily, access has demystified data analyses and provided more checks and balances on central office analyses.

On the negative side, we have seen some signs of the data anarchy about which Keller warned, including competing analyses, duplication of effort, and inconsistent definitions of key concepts. Solutions to these problems have to be found within the context of decentralized access. Restoring "hard control" by restricting access already granted is out of the question. The "genie is out of the bottle," and the inevitable trend is to greater access.

In an open-access environment, conformity to central standards is most effectively enforced through "soft control" techniques. Soft control is exercised by *reducing the effort to be consistent.* One of the lessons we learned in providing access to our first student reporting data bases was that these data bases made it *more* effortful to use official definitions than to use less accurate, inconsistent ones.

For example, ethnic background information is collected from student self-reports. One of the problems with the self-reports is many international students identify themselves as having non-white ethnic backgrounds, despite instructions not to do so. Our student record system stores the stated ethnic background. To correctly count American-born minority students, one must check visa flags and override the ethnic identification for those with student visas. Making this correction was much harder than just using the standard ethnic background element. Consequently, we saw a number of inaccurate minority counts coming from unit-based analysts.

The solution to the problem was to create in our reporting files a separate adjusted ethnic background element which had pre-programmed the visa override. This element made it as easy to use the official, consistent definition as it was to use the incorrect one. After this element was introduced, unit analyses became much more accurate and consistent with central counts.

The same logic has been applied to other elements in an official census file, which is now the source of the official registration statistics and many ad hoc reports. The census file makes it easy

to be consistent and official in a number of definitions related to student headcounts. We are working on other census files containing data on retention, admissions, and financial aid.

The principle of easing the effort to be consistent can be further implemented through the use of menu-driven systems for producing semicustom reports (Matross and Murdoch, 1990). We have developed a menu-driven reporting system that offers a range of pre-defined reports which can be run for any number of custom subgroups. The custom subgroup reports are completely consistent with official registration statistics.

Another innovation that follows the principle of reducing effort is an electronic fact book of summary statistics. Having summary data accessible in electronic form is important because it allows those who are too busy to learn to program unit record data to easily use central data in their own reports. We have found that administrators, both in central and unit offices, sometimes use incorrect data simply because they can't easily put their hands on the correct reports. They also waste effort keying data that already exist in electronic form. We have begun to develop our electronic factbook using the Internet Gopher, a data retrieval software package developed at the University of Minnesota and now used at many other universities. The Gopher software allows one's computer to be a server to a clients on a network connected to the Internet supernetwork. Anyone on our campus network, or in fact, anyone on the Internet can access our statistical reports.

One of the keys, then, in developing a virtual office of disaggregated analysts doing consistent work is to exert soft control by making it easier to use consistent official data and definitions than to use inconsistent ones. Before the days of open access, institutional researchers sometimes made their careers by "dinking with the data," producing final figures by adjusting operational data with jealously guarded formulas and procedures. In an open-access environment, this old approach is all wrong. The correct adjustments must be built into the data bases themselves, or data chaos will ensue.

2. The favor bank: a step toward functional project teams

Functional project teams, the second element in Savage's vision of the virtual enterprise, are very much in vogue in American industry. Based on the success of Japanese auto companies in dramatically shortening the new model development cycle, many companies are now drawing project teams from across divisional boundaries (Womak, Jones, and Roos, 1990).

There have been problems, though, with implementing functional project teams. General Motors, in particular, had early failures with the implementation of the project team model. In analyzing the GM failures, Womak, Jones, and Roos (1990) pointed to the lack of organizational rewards as the critical factor. Workers from different departments were assigned to project teams, but they were still evaluated by their supervisors in their own departments, not by the project leaders. Their careers suffered because they were not advancing as fast as those who stayed back in the departments. The old organizational structure provided no tangible incentives for team participation.

The lesson is that true teams won't work unless home departments reward team participation. Before trying to implement teams, one must analyze the organization to decide whether the reward structure can be changed. If the assessment is negative, then project teams will not succeed.

In our case, the assessment has been negative. The organizational culture is such that true joint projects are a rarity, because career incentives remain within a department or vice presidential area. We have many committees, but they don't function as true teams because committee members are seldom evaluated on the basis of their contributions. One or two committee members or staff wind up doing nearly all the work, because they are from the unit that appointed the committee, and they are being held accountable for the results.

Within such a culture, we have had better success with a more modest approach to teamwork--the favor bank. The term "favor bank" was coined by Tom Wolfe in his book, *The Bonfire of the Vanities* (Wolfe, 1987), to describe how things get done in New York City. People make deposits in the favor bank by doing favors for other people with whom they work. They make

withdrawals by asking for favors when they need them. Implicit rules of accounting keep favor deposits and withdrawals more or less in balance.

The favor bank is the glue that binds together institutional researchers at the University of Minnesota. Projects remain the responsibility of individual researchers, but they call on others to deposit favors with the understanding that the depositors can later make withdrawals. The deposits depend on the particular skills of the office. Data and Reporting Services, frequently enters into "brains and brawn" relationships with other offices. They supply the brains, and we supply the brawn. For example, we undertook a recent revision of freshman course placement procedures. We had the brawn in terms of student record data and programmers who can analyze it. We lacked, however, the brains in terms of measurement expertise to do a good job of developing prediction equations and cut scores. We thus tapped a measurement expert from the counseling service to guide the analyses. For this rather large favor deposit, he can expect to be able to make withdrawals in the form of Data and Reporting Services' providing data and analyses for his next student needs survey.

The success of the favor bank depends on there being enough diversity in the skills of different offices to make their contributions worthwhile. Our campus has such diversity. One office is especially good at desktop publishing, another at regression analyses, another at statistical programming, and another at questionnaire research. The success of the favor bank also depends on a *de facto* division of turf. One of the favors that an office deposits is staying out of another office's areas of responsibility unless asked by that office. Some turf-crossing is inevitable, such as the case when two vice presidents want data in the same area and make separate requests to different research offices. The favor in this case has been to coordinate the responses with the other research office.

The concept of a favor bank falls short of the modern idea of functional project teams, but it is a step in that direction and doesn't require giving up departmental responsibilities and departmental rewards at a time when budget cuts have hardened organizational lines.

3. A common publication outlet with peer review.

Packaging information in a consistent form that busy administrators can absorb is increasingly a challenge. Despite their scholarly backgrounds, college administrators have less and less time to search for the data they need and reflect on it once they find it. Open data access exacerbates the problem. If more and more people are doing analyses, the chances of there being the analysis you need increase, but your chances of being able to put your hands on it decrease.

On our campus, a loose consortium of central office and collegiate unit institutional researchers talked about the problems of data dissemination and how to deal with them. We observed that we all published our reports in different formats, and sent them to different distribution lists. We also noted that we often found out about each other's work only when we went to a conference where the work was being described. We even confessed that when we did get each other's lengthy and scholarly reports, we didn't always read them from cover to cover. If those of us in the profession didn't read the full reports, how could we expect busy administrators to do so?

After some discussion, we developed an idea to deal with several of these dissemination problems at once. The idea was for a jointly published series of brief reports. The brief reports are sent to a centralized list of recipients and are published in the same format, a two-to-eight page executive summary, under the title, *Research on University of Minnesota Students* (See Exhibit 1 for sample pages). The reports are numbered consecutively and published whenever one of us has something he or she wants to publish Data and Reporting Services agreed to maintain the mailing list and to do the publishing if contributors submitted their copy electronically and agreed to pay for printing their piece. Each author continues to publish the longer report from which a synopsis is taken, and is responsible for mailing it to those who request it.

There is no editor; the author has final say over the content of his or her material. We initially agreed, however, to have at least two colleagues review the copy before it was published. That agreement was expanded after the first couple of issues to give every member of the consortium

an opportunity to review each piece. While this procedure takes longer, it helps ensure that each author is aware of unforeseen unit sensibilities.

The series has been well received. Administrators in both central offices and collegiate units have expressed their approval. After twelve issues, the initial mailing list of about 75 individuals has grown to nearly 200 as a result of requests to be put on the mailing list. The main problem with the series is keeping up its momentum. The lack of an editor and a regular schedule means that it is easy for us collectively to lapse into the old ways of uncoordinated data dissemination. A consortium member occasionally has to nag a colleague into publishing in the series.

Besides using the regular mailing list, we have also made the brief reports available on the campus computer network, using the Gopher software described earlier. As more administrators become regular users of the campus network, electronic publication will become increasingly important. Additionally, we have started an electronic discussion group on student data within the university, using a local LISTSERVE. Interested staff and faculty can ask questions about student data, and institutional researchers can exchange questions and reports. Answers are open to all, and inconsistencies become apparent.

4. A shared master plan of ongoing projects

The last element in our effort to build a virtual office is by far the most ambitious and is just in the proposal stage. We think it is an important idea, but its implementation is far from certain. The idea is for a shared master plan of core studies. It begins with the observation that different offices on campus have been funded to do a wide range of different studies of our students. Some of the studies have been repeated over time, while others have been done only once.

Collectively, the studies have covered a wide range of topics, but leave some gaps when compared with an ideal template of the kinds of information needed. Our proposal is to put the individual studies in a master plan of core studies, add some new studies to fill the gaps, and put them all on a routinized schedule. The proposal is premised on the ideas that:

1. Information is difference. Individual studies gain usefulness exponentially when they are systematically repeated to yield trend data.
2. Good information systems answer questions, but outstanding information systems develop answers before questions are even asked. A coherent study plan will *anticipate* the new questions that ever-expanding accountability demands will bring.

Based on an analysis of the information administrators have requested in the past, our proposed plan begins with a template of four study categories:

1. **Student outcomes**. Studies of how well students perform academically and in other areas. Includes both short-term indices such as grades and retention, and long-term indices such as vocational placement and community involvement.
2. **Marketing studies**. Studies of student demographics and attitudes designed to support enrollment management, including enrollment projections, admitted student surveys, and analyses of testing service data.
3. **Evaluation of student services and programs**. Student evaluations of both global aspects of their University experience, such as curriculum and climate, and of specific individual services, such as counseling and financial aid.
4. **Student characteristics**. Profiles of the background and academic characteristics of different subgroups of students to be used to inform planning decisions. Includes studies of demographic characteristics, such as family and educational circumstances, attitudes, such as educational and vocational plans, and behavioral characteristics such as alcohol and drug use.

Exhibit 2 shows a proposed plan detailing the studies, the offices conducting them, their status as new or old, and a schedule for repeats. In keeping with our culture of unit autonomy, the plan is for a shared series of studies, not a series of shared studies. With few exceptions, one office would be responsible for each study. The other offices would serve as an advisory panel for the study, reviewing the methodology and results. Longer publications from the studies would be issued by the responsible office, and would be identified as one of the core series studies. Brief

reports of the study results would be printed in the *Research on University of Minnesota* students series. These core studies would represent only a part of the work of each office, and in some cases, only a small part.

The core studies plan is the true litmus test of our attempt to build a virtual office. It attempts to get different units to act as one in pursuing a common long-term vision, while at the same time leaving organizational lines intact and providing as much individual office autonomy as possible. The plan is ambitious in its attempt to add a level of new level of coordination, but it is modest in other respects. It coordinates only parts of a few central administration units, and does not try to coordinate all their projects or to include collegiate unit offices. Other units and other studies can be added to the core if the initial plan succeeds.

Generalization of the virtual office concept

Our approach to the creation of a virtual office is an adaptation to the circumstances at one of the largest and most decentralized campuses in the country. Part of that adaptation no doubt reflects the uniqueness of our circumstances, but much of it may be applicable to other settings.

One reason why the virtual office idea applies to other settings is that Keller's characterization of the problem of conflicting forces for centralization and decentralization applies to the whole field of institutional research. Nearly all schools, large and small, provide low-cost access to powerful microcomputers and easy-to-use software. At the same time, nearly all schools are feeling the effects of budget tightening. The computer provides the tool, and budget cuts provides the motive to fuel a strong desire for departmental data access and do-it-yourself data analyses.

Our four-part approach represents a fairly minimal effort toward a virtual office. Our campus culture demands that we go out of our way to respect individual unit autonomy. Our minimalist approach is probably most applicable to similar large campuses and to systems made up of several campuses. In both these situations there are likely to be to be competent unit analysts with a strong desire to maintain their autonomy.

Smaller, single campuses can take a more forceful approach to reconciling the pulls of centralization and decentralization. Some campuses don't have to pursue a virtual organization at all; they can accomplish their purposes with an actual organization. If decentralized data needs arise, these campuses can meet them by expanding the functions or size of a central staff. Smaller campuses should also be able to form functional project teams more easily. If organizational lines are simpler, it is much easier to assign someone to a project team and ensure that he or she will be evaluated and rewarded for performance on the project.

Regardless of one's setting, it is now clear that the technological revolution in higher education is well underway, and institutional research must adapt its methods and organizations to the new circumstances.

References

Davidow, W.H., and Malone, M.S. (1992). The virtual corporation: Structuring and revitalizing the corporation for the 21st century. New York: HarperBusiness.

Keller, G. (1990). What does the future hold for institutional research? General session address to the 30th annual forum of the Association for Institutional Research, Louisville, KY.

Matross, R.P. and Murdoch, J.S. (1990). Semicustom reports: A faster and smarter way to deliver information. Paper presented at the first joint conference of the Illinois Association for Institutional Research and the Association for Institutional Research for the Upper Midwest, Chicago.

Savage, C.M. (1990). Fifth generation management: Integrating enterprises through human networking. Burlington, MA: Digital Press.

Wolfe, T. (1987). The bonfire of the vanities. New York: Farrar, Strauss, Giroux.

Womak, J.P., Jones, D.T., and Roos, D. (1990). The machine that changed the world. New York: Rawson Associates.

An earlier version of this paper was presented at the 20th annual conference of the Association for Institutional Research in the Upper Midwest in St. Paul MN, October 22, 1992

RESEARCH ON UNIVERSITY OF MINNESOTA STUDENTS

Research Summary No. 12 April 6, 1993

Twin Cities Campus Freshman Subgroup Graduation Rates

Ronald P. Matross and Stephen L. DesJardins
Data and Reporting Services, 260 Williamson Hall
231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612) 625-6556

Introduction

Recent federal legislation requires colleges and universities to publish overall graduation rates of new entering freshmen. While disclosure of graduation rates is clearly in the public interest, a single total figure can sometimes be misleading. At large multipurpose institutions like the University of Minnesota a given freshman class is composed of many diverse groups of students, varying widely in their backgrounds, talents, and experiences. A single overall graduation rate masks substantial differences among subgroups within the class.

This brief report describes graduation rate differences among selected subgroups of Fall 1984 Twin Cities campus freshmen (New High School students—NHS). We selected the 1984 cohort because it allows us to analyze near-final rates after differences in time to graduation have been resolved. The rates are first broken out by the collegiate unit the student entered and then by a variety of academic and demographic characteristics.

Unit Differences

Chart 1 shows that unit rates ranged from 41% to 65% around an overall rate of 50%. General College entrants are not included because in 1984 many of them were not seeking bachelor's degrees.

Chart 1. Eight-year bachelor's degree graduation rates of Fall 1984 Twin Cities campus NHS students by entry unit. *(General College entrants excluded)*

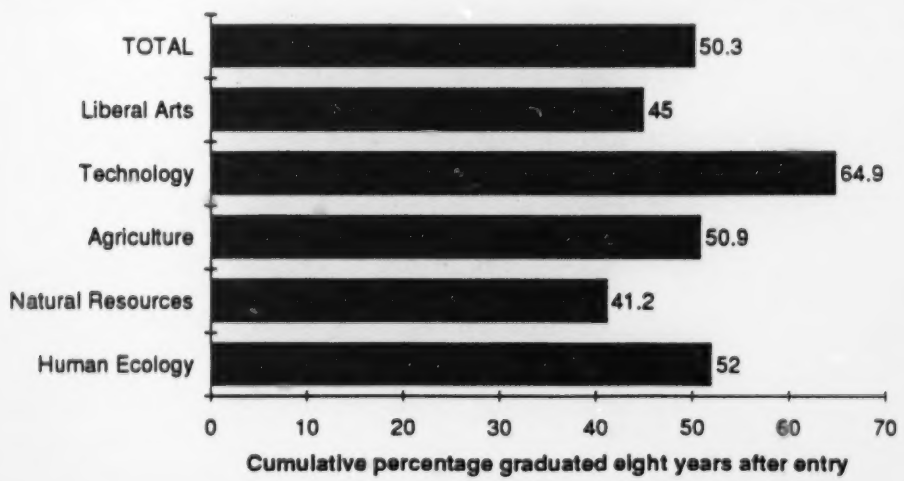

Table 1: Proposed Core Studies

Listed below are a series of suggested studies to be done on a regular basis by different units.

Office = Office primarily responsible for study
DRS = Data and Reporting Services
AA = Academic Affairs
OSA = Student Affairs Research
UCS = University Counseling Services
MPIS = Management Planning and Information Services

Term = Academic term when study is done

Stat = Status
New = New, not done before, and needing funding
Pre = Previously done, but needing funding for next round
On = Ongoing, being done now

Funding = Does study need additional funding?
Yes
No

Area = General subject of study
Eval = Evaluation of services or environment
Char = Analyses of student characteristics
Out = Studies of academic and other outcomes
Mktg = Studies used to support marketing and recruitment

Freq = Frequency of study (# of years between)
1st date = Most recent or soonest planned run of study
2nd, 3d, & 4th dates = next iterations of the study

Study	Descriptor	Office	Area	Stat	Fund	Term	Freq	1st	2nd	3d	4th
Retention analysis	Annual collegiate report of retention/graduation	DRS	Out	On	No	Fall	1	1992	1993	1994	1994
Student performance	Annual report of academic performance of subgroups	DRS	Out	New	No	Sum	1	1993	1994	1995	1996
Dropout survey	Survey of dropouts	DRS/AA	Out	New	Yes	Sum	5	1994	1999	2004	2009
Alumni survey	Survey of graduates/alumni of various years	DRS/AA	Out	New	Yes	Sum	5	1995	2000	2005	2010
Course placement	Calibration of placement equations and procedures	UCS/DRS	Out	Pre	No	Win	2	1993	1995	1997	1999
ACT plans/back	Compilation of ACT plans/background data from tape	DRS	Mktg	New	No	Fall	1	1993	1994	1995	1996
Admit survey	Reply form survey of admitted students	DRS	Mktg	New	Yes	Spr	1	1994	1995	1996	1997
Prospect survey	Survey of ugrad prospects/inquirers	DRS	Mktg	New	Yes	Spr	2	1994	1996	1998	2000
UG evaluation survey	Evaluation survey of current undergraduates	AA	Eval	Pre	Yes	Spr	1	1992	1993	1994	1995
Climate survey	Survey of students on campus climate	OSA	Eval	New	Yes	Win	5	1993	1998	2003	2008
Service evaluation I	Evaluation/usage survey of selected student services	OSA	Eval	New	Yes	Win	3	1993	1996	1999	2002
Service evaluation II	Evaluation/usage survey of selected student services	OSA	Eval	New	Yes	Win	3	1994	1997	2000	2003
Service evaluation III	Evaluation/usage survey of selected student services	OSA	Eval	New	Yes	Spr	3	1995	1998	2001	2004
Client evaluation cards	Compilation of response cards handed out by services	UCS	Eval	Pre	Yes	Fall	1	1993	1994	1995	1996
Work/finances study	Study of student work and finances	AA	Char	Pre	Yes	Win	5	1990	1995	2000	2005
CIRP survey	Survey on freshmen class plans and values	AA	Char	Pre	Yes	Fall	2	1991	1993	1995	1997
Student profile	Short annual summary of student characteristics	DRS	Char	On	No	Fall	1	1992	1993	1994	1995
Enrollment projections	Annual projections of enrollments	MPIS/DRS	Char	On	No	Spr	1	1992	1993	1994	1995
Alcohol/drug survey	Survey of students on substance use	OSA	Char	Pre	Yes	Win	5	1989	1994	1999	2004
Activities survey	Survey of students on non-classroom activities	OSA	Char	Pre	Yes	Spr	5	1991	1996	2001	2006
Service needs survey	Survey of student service needs	UCS	Char	Pre	Yes	Fall	5	1990	1995	2000	2005

Exhibit 2 Virtual office 13